

COMMITTEE MEMBERS

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Chairman – Randall S. Kroszner

Norman R. Bobins Professor of Economics and the Deputy Dean for Executive Programs at the University of Chicago's Booth School of Business

Vice Chairwoman – Sarah Dahlgren

Head of Regulatory Relations at Wells Fargo & Company

John Bottega is Executive Director of the Enterprise Data Management Council. He was previously the Principal and Managing Member of his own consulting firm, Data Management Advisory Services, LLC. At the same time, he served as Senior Advisor and Consultant for the Enterprise Data Management Council, responsible for the Council's Chief Data Office Forum and Data Management Best Practices Program. He is currently also a member of the Executive Advisory Board of NewVantage Partners, the Wall Street and Technology Reader Advisory Board, and the board of directors of a not-for-profit association focused on the improvement of systemic risk monitoring and financial market transparency.

Nicolas Christin is an Associate Research Professor at Carnegie Mellon University, jointly appointed in the School of Computer Science and in the department of Engineering & Public Policy. He holds a master and doctoral degree in computer science from the University of Virginia. Before joining Carnegie Mellon, Dr. Christin was a post-doctoral researcher at the University of California, Berkeley. His research interests are in computer and information systems security and privacy, with a focus on online crime and online fraud, digital currencies, and economic and human aspects of computer security.

Sarah Dahlgren is Head of Regulatory Relations at Wells Fargo & Company. Previously, she was a Partner at McKinsey & Company, where she was a member of the Risk Practice based in New York. Her recent experience also includes preparing several top domestic and foreign institutions for the 2016 comprehensive capital analysis and review; leading work to support foreign banking organizations in complying with enhanced prudential standards; supporting several major central banks in designing new supervisory programs, including stress testing and risk-focused examinations; and working with several top U.S. banks on recovery and resolution planning. Before joining McKinsey, Dahlgren spent 25 years at the Federal Reserve Bank of New York, where she became Executive Vice President of the Financial Institution Supervision Group in 2011. During the financial crisis, she led the Federal Reserve System's AIG Monitoring Team. During her career at the Federal Reserve Bank of New York, Dahlgren contributed to domestic and international supervisory policy objectives, including as Chair of the Senior Supervisor's Group and as a member of several working groups of the Basel Committee on Banking Supervision and Joint Forum.

Tom Dunlap is the Chief Data Officer, Information Services & Group Data Governance for London Stock Exchange Group. Previously, he was a senior consultant and advisor to Raymond James Financial and Lingotek, a financial tech company. Dunlap has also worked at Goldman Sachs, where he served in roles including Managing Director and Global Head for Enterprise Data Strategy and Reference Data Operations. He also was Head of Client Onboarding, Global Control, and Tax Operations in Salt Lake City. While there, he served as Co-chair of the Pricing Consistency Governance Group and as a member of the firm’s Federal Reporting Oversight Committee, the Private Wealth Management Valuation Committee, the Operations Data Digitization Council, and Financial Reform Steering Group. Before joining Goldman Sachs, Dunlap was a Vice President in the Worldwide Securities Services division at Citibank. He also currently serves as an industry liaison to the Enterprise Data Management Council and the Advisory Board of New Vantage Partners.

Lawrence Goodman is founder and president of the Center for Financial Stability (CFS) - an independent, nonpartisan think tank with business lines spanning the future of finance, data, policy, and technology. Mr. Goodman is an economist with expertise in global macro investment strategies, financial crises, and sovereign debt restructuring. He has advised hedge funds and governments and led research teams on Wall Street and at the U.S. Treasury. At Treasury, he co-founded and chaired an inter-agency working group - advising principals and deputies throughout the U.S. government on future financial and economic risks. Mr. Goodman served on the Executive Committee for the Global Equity Group at Santander Investment and on the board of the Emerging Market Traders Association – representing Bank of America. He is a member of the executive committee of the Society for Economic Measurement, member of the Bretton Woods Committee, and The Economic Club of New York.

William Hodash serves as Managing Director of Enterprise Data Management at the Depository Trust & Clearing Corporation (DTCC), responsible for data governance and data quality throughout DTCC’s businesses. In recent years, he has focused on the identification and development of opportunities in reference data management, assisting DTCC clients in meeting emerging regulatory requirements. He also serves as a trustee for the Securities Industry and Financial Markets Association’s Securities Industry Institute at the Wharton Business School of the University of Pennsylvania.

Greg Hopper is the Global Head of Risk Economics and Financial Services and Risk Management for Goldman Sachs. He oversees the Sovereign and Economic Risk Management Group, the Macroeconomics Team, the Credit Quantitative Analysis Group, and Risk Identification and Scenario Design Group. Hopper is a member of the Enterprise Risk Committee, Firm-wide Risk Committee, Firm-wide Model Risk Control Committee, Firm-wide Stress Test Committee, and the Risk Governance Committee. He chairs the Risk Identification and Scenario Design Working Group and the Regression Working Group. Hopper joined Goldman Sachs in 2004 as a Vice President and was named Managing Director in 2006. Before joining Goldman Sachs, Hopper was an Executive Director at Morgan Stanley, where he was head of the Credit Analytics Group.

Steve Joachim is the Chief Executive Officer of SHGB Associates LLC, which offers management consulting and data product services to young companies. Before SHGB Associates, Joachim was Executive Vice President of Transparency Services at the Financial Industry Regulatory Authority (FINRA). Before joining FINRA, Joachim was the Senior Vice President, Chief Strategy Officer, and General Manager for Plural from 1997 to 2001. Plural was a custom interactive software development and strategy firm. In 1983, he began a nearly 15-year stint with Merrill Lynch. Joachim has been the Chairman of the International Forum for Investor Education and has served as a member of the Philadelphia Stock Exchange Board of Governors, board of directors for Merrill Lynch Specialists, Inc., and board of directors for Wilco, Inc. He has also been a member of the Nasdaq Industry Advisory Committee and the American Stock Exchange Upstairs Member Advisory Committee.

Kathryn Judge is a Professor of Law at Columbia University. Judge's research focuses on financial regulation, financial innovation, regulatory architecture, and central banking. Her work regularly appears in top law reviews, and she has received multiple awards from her peers. Professor Judge serves as an Editor of the *Journal of Financial Regulation* and the CLS Blue Sky Blog. She is also a member of the board of directors of the *Columbia Business Law Review*. Before joining Columbia, she worked at Latham & Watkins LLP. She also served as a law clerk for Judge Richard A. Posner of the Seventh Circuit Court of Appeals and Justice Stephen G. Breyer of the U.S. Supreme Court.

Sandy Krieger heads the advisory board for GLMX, a financial technology firm for money market trading. She also serves on the board of directors of Deutsche Bank USA. Previously, Krieger was Executive Vice President and Chief Risk Officer of the Federal Reserve Bank of New York, retiring in July 2015 after 33 years. During that time, Krieger served as a member of the bank's management committee, chaired the bank's risk committee, and was involved in developing responses to systemic risk in financial markets. Krieger was also the bank's executive sponsor to the U.S. industry task force on triparty repo infrastructure, which developed a series of recommendations for reducing risks in the U.S. triparty repo market.

Randall S. Kroszner is the Norman R. Bobins Professor of Economics and Deputy Dean for Executive Programs at the University of Chicago's Booth School of Business. From 2006 to 2009, he served as a Governor of the U.S. Federal Reserve System. He chaired the Federal Reserve's committees on Supervision and Regulation and Consumer and Community Affairs. In these capacities, he took a leading role in developing responses to the financial crisis and undertaking new initiatives to improve consumer protection and disclosure for credit cards and mortgages. He represented the Federal Reserve on the Financial Stability Board and the Basel Committee on Banking Supervision and also chaired the working party of the Organization for Economic Cooperation and Development of deputy central bank governors and deputy finance ministers on international macro policy. From 2001 to 2003, he served in the White House as a Member of the President's Council of Economic Advisers.

Nellie Liang is Miriam K. Carliner Senior Fellow in Economic Studies for the Brookings Institution. She also is a consultant for the International Monetary Fund's Monetary and Capital

Markets department and a member of the Congressional Budget Office's Panel of Economic Advisors. Before joining Brookings in February 2017, she was the Director of the Division of Financial Stability at the Federal Reserve Board. She founded the division in 2010 and focused greater attention on identifying and monitoring risks to financial stability and developing macroprudential policies to mitigate systemic risks. Liang's recent research has focused on financial vulnerabilities and macroeconomic dynamics, fragilities in short-term funding markets, effects of creditor rights on real economic activity, and the cost of equity capital. Her research has been published in several journals. She holds a doctorate in economics from the University of Maryland and a bachelor's in economics from the University of Notre Dame.

Rosemary Marcuss served as Director of Research, Analysis, and Statistics at the Internal Revenue Service until 2015. While there, she redesigned and expanded the TaxStats research program. Marcuss served for 15 years as Assistant Director of the Congressional Budget Office (CBO) for Tax Analysis, where she put the CBO tax estimation models in place. Marcuss also was Deputy Director of the Bureau of Economic Analysis for 12 years. She was instrumental in creating the agency's research program and redesigning the production analytics for gross domestic product, or GDP, statistics. Marcuss has served as President of the National Association of Business Economics. She is a recipient of the Presidential Rank Award and the Davie-Davis Public Service Award of the National Tax Association.

Sandie O'Connor is the Chief Regulatory Affairs Officer for JPMorgan Chase & Co. She also serves on firm-wide governance committees and chairs the JPMorgan Chase Foundation Investment Committee. O'Connor sets the firm's comprehensive regulatory strategy and leads engagement with G-20 international standard setters, regulators, and policymakers regarding evolving regulation and legislation. O'Connor joined JPMorgan in 1988 and has held several executive positions. Most recently, she was Treasurer of JPMorgan Chase, where she managed the firm's capital, balance sheet, liquidity and funding strategy and positions, as well as the firm's rating agency relationships and corporate insurance activities. O'Connor serves on the boards of several industry trade associations. She also serves as the Chair of the Federal Reserve's Alternative Reference Rates Committee, is a member of the Treasury Markets Practitioners Group, and is Chair of an advisory committee of the Salzburg Global Seminar. O'Connor also serves as Vice Chair of the board of directors of the YMCA of Greater New York and Chair of its Development Committee.

Bryce Pippert is Senior Vice President and the Digital Capability Lead at Booz Allen Hamilton. He has led major digital transformation programs, including open data, data standardization, data governance, and data quality initiatives. He has helped clients implement major reform agendas and significant legislative changes such as the Digital Accountability and Transparency Act, Patient Protection and Affordable Care Act, and the Pension Protection Act. Before joining Booz Allen, Pippert served in various leadership roles for UBmatrix, Inc. (now part of Donnelley Financial Solutions) and as Chief Executive Officer of XBRL Solutions, Inc. Pippert is on the boards of directors of the Data Coalition and the Data Foundation. He is an advisor to the Center for Open Data Enterprise and was on the Advisory Committee for the Open Data Transition Report.

Kim Schoenholtz is the Henry Kaufman Professor of the History of Financial Institutions and Markets at the Leonard N. Stern School of Business at New York University. He teaches courses on money, banking, and financial markets, as well as macroeconomics. He also directs the NYU Stern Center for Global Economy and Business. Previously, he was Managing Director and Senior Advisor in Citigroup's Economic and Market Analysis department. He served as Citigroup's global Chief Economist from 1997 until 2005. Schoenholtz started his career at Salomon Brothers in 1986. He worked in Bond Market Research in New York before moving to Tokyo in 1988. In 1992, he transferred to London to serve as the head of economics and market analysis in Europe. He was named Salomon's Chief Economist in 1997 and subsequently became Chief Economist at Salomon Smith Barney and at Citigroup. Schoenholtz returned to New York in this role in 1999.

René M. Stulz is the Everett D. Reese Chair of Banking and Monetary Economics at the Fisher College of Business of the Ohio State University and Director of the Dice Center for Research in Financial Economics. He belongs to the board of Trustees of the Global Association of Risk Professionals and is a senior advisor of Cornerstone Research. He is a former President of the American Finance Association and a former Editor of the *Journal of Finance*. He was awarded a Marvin Bower Fellowship from the Harvard Business School, a Doctorat Honoris Causa from the University of Neuchâtel in Switzerland, and the Risk Manager Award of the Global Association of Risk Professionals. In 2004, the magazine *Treasury and Risk Management* named him one of the 100 most influential people in finance.

Colin Teichholtz is Colin Teichholtz is a Portfolio Manager and Head of Fixed Income at BlueMountain Capital Management LLC. He was previously a Partner and member of the Executive Committee at Pine River Capital Management, LP, a firm that manages hedge funds and the mortgage real estate investment trust Two Harbors Investment Corp. Teichholtz was the co-manager of the Pine River Fund and the head of Pine River Customized Solutions. Before joining Pine River in 2011, he was a Managing Director at Morgan Stanley from 2003 to 2011. At Morgan Stanley he was initially the head trader of the agency mortgage-backed securities pass-through desk, and he ultimately had added responsibility for managing the trading desks for interest rate swaps, U.S. Treasury bonds, and agency debentures. From 2000 to 2003, Teichholtz was a Portfolio Manager at Goldman Sachs Asset Management, where he oversaw the Emerging Markets Debt team, and he launched the Goldman Sachs Global Opportunities Fund. From 1992 to 2000, Teichholtz was a trader at Goldman Sachs in agency mortgage-backed securities, Latin American Brady bonds, and Asian Emerging Markets credit.

Susan M. Wachter is the Albert Sussman Professor of Real Estate and Professor of Finance at The Wharton School of the University of Pennsylvania. She is also Director of the Wharton GeoSpatial Initiative and Lab. From 1998 to 2001, Dr. Wachter served as the presidentially appointed Assistant Secretary for Policy Development and Research at the U.S. Department of Housing and Urban Development (HUD). In that position, she was the senior urban policy official and Principal Advisor to the Secretary on HUD policies and programs. Dr. Wachter also formerly served as Chairwoman of Wharton's Real Estate Department, president of the

American Real Estate and Urban Economics Association, and co-editor of the leading academic real estate journal, *Real Estate Economics*. She is a co-founder and co-director of the Penn Institute for Urban Research. Dr. Wachter is the author of more than 200 scholarly publications and is the recipient of multiple teaching awards at the Wharton School. She often appears in the national media and is frequently invited to testify to the U.S. Congress on housing policy.

Betsy Ward is Chief Financial Officer and Chief Actuary of MassMutual. A member of MassMutual's executive leadership team, Ward currently leads MassMutual's group and corporate financial reporting, planning and analysis, treasurers, valuation, strategy, procurement, and corporate development functions. Previously, she led the enterprise risk management and actuarial division across all of its insurance and asset management companies. Before joining MassMutual affiliate Babson Capital Management in 2001 as a Portfolio Manager, she worked at American Skandia, Charter Oak Capital Management, and Aeltus Investment Management in insurance company portfolio management. She also worked in various capacities for Aetna Life & Casualty. Ward has been Chair of the American Council of Life Insurers' Global Risk Management Committee, and she is a founding member of the North American CRO (chief risk officer) Council. Ward is a fellow of the Society of Actuaries, a professional risk manager, and a member of the American Academy of Actuaries.

David Weisbrod is a board member of the BNY Mellon Government Securities Services Corp. Previously, he was Chief Executive Officer of LCH Group Ltd.'s U.S. subsidiary. In June 2015, Weisbrod was appointed as London Stock Exchange Group's United States country head. Previously, he was Vice Chairman of Risk Management at JPMorgan Chase & Company. Weisbrod served as a member of the New York Federal Reserve Bank's Payments Risk Committee, a Director of the Depository Trust & Clearing Corporation, and a Director of CLS Group Holdings and CLS Bank International. He currently serves as a member of the Commodity Futures Trading Commission's Global Markets Advisory Committee.

Michael P. Wellman is the Lynn A. Conway Collegiate Professor of Computer Science & Engineering at the University of Michigan. Dr. Wellman's research has focused on computational market mechanisms and game-theoretic reasoning methods, with applications in electronic commerce, finance, and other domains of strategic decision-making. Dr. Wellman previously served as Chair of the Association for Computing Machinery's Special Interest Group on Electronic Commerce and as Executive Editor of the *Journal of Artificial Intelligence Research*. Dr. Wellman is a Fellow of the Association for Computing Machinery. He is also a Fellow of the Association for the Advancement of Artificial Intelligence and 2014 recipient of the Autonomous Agents Research Award from the association's Special Interest Group on Artificial Intelligence.